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10/553,467	11/17/2006	Philippe Espiard	279791US0PCT	8944

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EXAMINER	
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ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
04/08/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/553,467	ESPIARD ET AL.	
	Examiner	Art Unit	
	MICHAEL PEPITONE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,21 and 23-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,21 and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-12, 14, 21, 24-25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Thimons *et al.* (US 5,437,928).

Regarding claims 1-2, 4, 6, 8-12, 14, 21: Thimons *et al.* teaches a glass fiber mat {acoustic insulation product} (1:4-6; 2:17-30; 5:36-50) comprising glass fibers and a sizing composition containing a polymeric amine (2:50-68) and a water soluble, non-volatile carboxylic acid (4:63-5:5); wherein a specific embodiment contains tetraethylene pentamine {mw = 189.31 g/mol} and maleic acid {mw = 116.1 g/mol} [instant claims 1-2, 4, 6, 8-12, 14] (6:65-7:45).

Regarding claim 3: Thimons *et al.* teaches oxalic acid {mw = 90.03g/mol) {substitute for maleic acid} (5:2-4).

Regarding claim 7: Thimons *et al.* teaches methacrylic acid {mw = 86.04 g/mol) {substitute for maleic acid} (5:2-4).

Regarding claims 24 and 27: Thimons *et al.* teaches a method for preparing a glass mat comprising preparing a sizing composition by dissolving {diluting} maleic acid in water, then adding the maleic acid solution to a solution containing tetraethylene pentamine {wherein the tetraethylene pentamine solution was dissolved in hot water (140-160 ^{o}F = 60-71 ^{o}C)}; applying

the sizing composition to glass fibers; and baking the glass fibers (7:1-34). {Thimons *et al.* teaches moderate heating of the sizing composition (5:60-61)}.

Regarding claim 25: Thimons *et al.* teaches about 2-19 wt% polymeric amine {tetraethylene pentamine} and about 6-15 wt% water soluble, non-volatile carboxylic acid {maleic acid} (5:36-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thimons *et al.* (US 5,437,928), as applied to claim 1 above, in further view of Nigam (US 6,171,444).

Regarding claim 5: Thimons *et al.* teaches the basic claimed product [as set forth above with respect to claim 1].

Thimons *et al.* does not teach the acids of instant claim 5. However, Nigam teaches a sizing composition for glass fibers (7:40-31; 11:35-40) comprising polyacids such as maleic acid, oxalic acid, citric acid and tartaric acid (8:16-25). Thimons *et al.* and Nigam are analogous art because they are concerned with a similar technical difficulty, namely the preparation of sizing composition for glass fibers. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined citric acid and tartaric acid, as taught by Nigam in the invention of Thimons *et al.*, and would have been motivated to do so since Nigam suggests that citric acid and tartaric acid are equivalent to maleic acid and oxalic acid when used in glass fiber sizing compositions (8:4-31).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thimons *et al.* (US 5,437,928) as applied to claim 1 above.

Regarding claim 13: Thimons *et al.* teaches the basic claimed product [as set forth above with respect to claim 1], wherein the sizing composition comprises about 2-19 wt% polymeric amine {tetraethylene pentamine} (or about 3.5-26 wt% of polyamine organosilane reaction product}, and about 6-15 wt% water soluble, non-volatile carboxylic acid {maleic acid} (5:36-55).

Thimons *et al.* does not teach 20-80 parts by weight polycarboxylic acid. However, it has been well established that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) [MPEP 2144.05]. At the time of invention a person of ordinary skill in the art would have found it obvious to have optimized the

amount of maleic acid, as taught by Thimons *et al.*, as commonly practiced in the art, and would have been motivated to do so since the desired level of properties in fabricated products made using the glass fibers treated with the sizing composition can be achieved (5:1-9).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thimons *et al.* (US 5,437,928), as applied to claim 1 above, in further view of Drummond (US 4,158,557).

Regarding claim 23: Thimons *et al.* teaches the basic claimed product [as set forth above with respect to claim 1], wherein a specific glass mat has a density of 2 oz/ft^2 {610 g/m^2} (8:24-26). Thimons *et al.* teaches glass mats having a density of about 1 oz/ft^2 {about 305 g/m^2} (5:58-63).

Drummond (US 4,158,557) provides evidence for glass mats having a density of about 1 oz/ft^2 {about 305 g/m^2} (6:44-47).

Thimons *et al.* does not teach glass mats having a density of between 10 and 300 g/m^2. However, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) [See MPEP 2144.05].

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thimons *et al.* (US 5,437,928) as applied to claim 24 above.

Regarding claim 25: Thimons *et al.* teaches the basic claimed method [as set forth above with respect to claim 24], wherein a silane is added to the sizing composition (7:15-26).

Thimons *et al.* does not teach adding the silane after the polycarboxylic acid is added. However, a prima facie case of obviousness exists where changes in the sequence of adding ingredients derived from the prior art process steps. *Ex parte Rubin* , 128 USPQ 440 (Bd. App. 1959). See also *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results*); In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.) [See MPEP 2144.04].

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. See attached form PTO-892.

Response to Arguments

Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PEPITONE whose telephone number is (571)270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MFP
31-March-09

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796